Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Section: \_\_\_\_\_\_\_

|  |
| --- |
| Each of you has a **magnet**. Take a few minutes to observe its properties and to find out what it can do. Record your careful, detailed observations below. |
| 1.Magnet Observations: |
| 2.Is there something that is the same about all the objects that stick to your magnet? Explain. |

3.If an object sticks to a magnet, it is probably made of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

|  |
| --- |
| What happens when magnets interact with other magnets?  Record your careful, detailed observations below. Drawing always help! |
| 4.Magnet **Interaction** Observations: |
| 5.Make a claim (a true statement based on your data from above) about magnets using the word **attract**. |
| 6.Make a claim (a true statement based on your data from above) about magnets using the word **repel**. |

7.The two different sides of a magnet are called **poles**. One is called the south pole and one is called the north pole. Every magnet, including yours, has a south and north pole. Your doughnut magnets have the poles on the flat surfaces. Label the north and south poles on this magnet.

8. Do magnets attract when the north pole of one magnet comes close to the north pole on a second magnet? Or do magnets attract when the north pole on one magnet comes close to the south pole on a second magnet? **Hypothesize**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

9.Our planet, Earth, is a magnet. Have you ever witnessed any evidence that would support this claim? Describe. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

10.What could we do to collect evidence to support the claim that Earth is a magnet? What kinds of tests could we run? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

11. We will use a **compass** to help us locate the direction of Earth’s geographic north pole. Your teacher will show you how to use your compass to find north!

12. Let’s run a test! When a **permanent magnet** hangs from a string so it can swing freely, the north pole of the magnet will align toward Earth’s North Pole. Your job is to work in your groups to find the north pole and south pole of **your magnet**. Your group can have a piece of string to hang the magnets and a piece of tape to label the north side of each magnet when you find it. You have 5 minutes to find the north pole of your magnet! GO!

13. Confirmation of Poles! Your teacher will show you how to test if you labeled the north pole correctly. Did your group succeed? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |
| --- | --- |
| We have confirmed magnets have two poles. Can you figure out which poles attract and which ones repel? | |
| South vs. South |  |
| South vs. North |  |
| North vs. North |  |

14. Clean up all your supplies so they are ready for the next class.

15. Use the glossary of Electromagnetic Force and add the following words to your vocabulary – Magnet, Permanent Magnet, Poles, Attract, Repel, Compass